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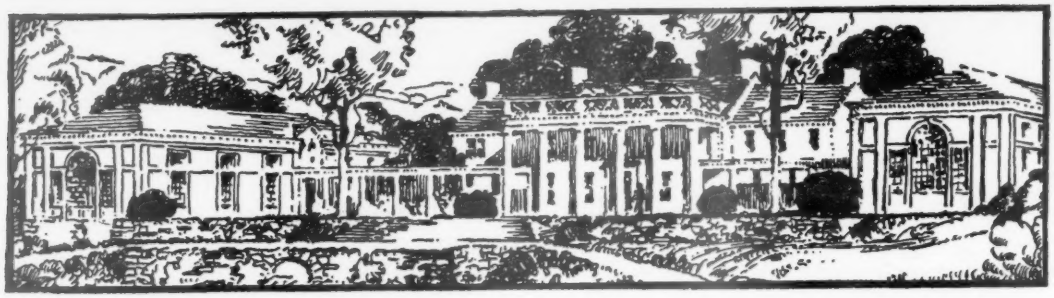

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TEXTILE TECHNOLOGY DIGEST

VOLUME 4 NOVEMBER 1947 NUMBER 11

Abstracts

ORGANIC FIBERS I

Vegetable fibers I 1

Bast fibers. Practical utilization of Indian bast fibers other than jute. S. C. Mody. *Indian Textile J. 57,* 731-3 (May, 1947).

Properties, uses, cultivation and processing of flax, ramie, and hemp are reviewed. TTD: 11-47

Cotton characteristics. Effect of fertilizers on yield, fiber properties, and spinning value of cotton. D. L. Sen & Nazir Ahmed, Technological Laboratory (Bombay). *Indian Cotton Growing Rev. 1,* 45 (Jan. 1947).

Spinning tests showed that fertilizers produced stronger and less neppy yarn when the original fertility of the soil was low, but no improvement was observed when the soil was rich. TTD: 11-47

Flax. New Flemish methods of flax pulling, retting, straw drying, and scutching. Anon. *Fibres, Fabrics & Cordage 14,* 316-17 (July, 1947).

Belgian methods of retting, drying, and scutching flax are reviewed. TTD: 11-47

Flax. Flax utilization. A. J. Turner, Linen Industry Research Assn. *Textile Mfr. 73,* 162-3, 165 (Apr. 1947); *Fibres, Fabrics & Cordage 14,* 174, 176-7 (Apr. 1947).

Methods of processing, properties, and types of fabrics of flax are reviewed. TTD: 11-47

Indian cotton tests. Precleaning and ginning tests on Indian cottons. II. V. Venkataraman. Technological Laboratory (Bombay). *Indian Cotton Growing Rev. 1,* 158-62 (July, 1947).

The effects of using different saw speeds and different rates of feed in the saw gin, the effect of employing overlaps in a double-roller gin on the lint produced and its spinning qualities, and the effect of operating at various speeds in both types of gins are discussed, and the conclusions summarized. Results for different cottons are published separately in Leaflets 8-14 and 16-19. TTD: 11-47

Ramie. Ramie—Cinderella of bast fibers. Anon. *Fibres, Fabrics & Cordage 14,* 109-10, 112-13 (Mar. 1947).

The properties, growing, processing, and spinning of ramie are reviewed. TTD: 11-47

Ramie. Ramie fiber. I. Roehrich & B. K. Nhuan. *Agron. Trop.* No. 11/12, 593-616 (Nov.-Dec. 1946). *Chimie et Industrie 58,* No. 2, 175 (Aug. 1947).

The properties and industrial uses of ramie and the method for spinning it are described in detail. TTD: 11-47

Ramie. Ramie products in Florida Everglades. Willis G. Waldo, Florida Ramie Products, Inc. *Chemurgic Digest 6,* 309, 311-16 (Nov. 15, 1947).

Improvements in mechanical decortication, and in degumming methods have been put to use with promise of success. Details of ramie properties, planting, and processing are given. LCL TTD: 11-47

Ramie decorticator. American mechanical ramie decorticator. Anon. *Fibres, Fabrics & Cordage 14,* 156 (Apr. 1947).

An illustrated description of a new machine for decorticating green ramie, and its operation. TTD: 11-47

Retting. Process for retting linen, hemp or other fibrous materials. E., S. J. E., & J. L. A. Larsson & N. H. Zetterman. Swed. P. 115 300, Nov. 6, 1945. *Chimie et Industrie 57,* No. 2, 162 (Feb. 1947).

The retting is carried out in one or more canals filled with water. The crude fibrous materials are placed in vessels which are permeable to water, and are drawn along the canals by means of carts. Each vessel is placed in a cart and attached to a lock which can be drawn from above. TTD: 11-47

EVOLUTION OF GOSSYPIUM AND DIFFERENTIATION OF CULTIVATED COTTONS. J. B. Hutchinson, R. A. Silon & S. G. Stevens. Oxford Univ. Press; 1947; price 15s.

Reviewed in *Empire Cotton Growing Rev. 24,* 276-80 (Oct. 1947). TTD: 11-47

FLAX DISEASES. R. McKay. Flax Development Board, Ltd., 2 Kildare Place, Dublin; 51 pp.; price 5s.

Reviewed in *Fibres, Fabrics & Cordage 14,* 226 (May, 1947). TTD: 11-47

GMINDE, A. G. (COTTONIZED FLAX PROJECT) (FLOCKENBAST) AT REUTLINGEN. Anon Field Information Agency, Technical, Report No. 167; price 1s 1d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

UTILIZATION OF COTTON IN GERMANY. Anon. Field Information Agency, Technical, Report No. 982; price 1s 1d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

Animal fibers I 2

Camel hair. His coat—and ours! Anon. *Ambassador,* No. 5, 137-40 (1947).

A brief discussion of the various grades of camel hair, its properties and uses. TTD: 11-47

Felt hardening. W. H. Kingston (to Wm. Bywater, Ltd.). Brit. P. 583 042, 583 063, *Textile Mfr. 73,* 197, 292 (Apr., June, 1947).

A machine for felting and hardening the felt comprises a pair of flat tables, to the lower of which at least a positive motion is imparted. TTD: 11-47

Fur dressing. Process for dressing the nap of fur. Imperial Chemical Industries, Ltd. French P. 913 400, Sept. 5, 1946. *Chimie et Industrie 57,* No. 4, 378 (Apr. 1947).

Fur is treated with an acid solution of formaldehyde, with a pH of no more than 1. This treatment has especial application to furs used in the manufacture of felts, and particularly for hats. TTD: 11-47

MANUFACTURE OF COMPRESSED WOOLEN FELT AND HAIR FELT IN GERMANY. Anon. Brit. Intelligence Objectives Subcommittee Report No. 1450; price 2s 2d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

MISCELLANY OF GERMAN WOOL TEXTILE INDUSTRY. Anon. Brit. Intelligence Objectives Subcommittee Report No. 1362; price 5s 2d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

Artificial fibers I 3

Artificial filaments. Brit. Celanese, Ltd. Brit. P. 581 354. *Textile Mfr. 73,* 195 (Apr. 1947).

Artificial filaments are produced by extruding a spinning solution in a volatile solvent through orifices into a chamber containing a mist in which the solvent is soluble and the filaments insoluble, thus setting the extruded filaments. TTD: 11-47

Rayon-rubber bond. D. Entwistle (to Courtaulds, Ltd.) Brit. P. 581 616. *Textile Mfr. 73,* 196 (Apr. 1947).

Viscose rayon filaments have an improved adhesion to rubber if a small proportion (no more than 2% based on the dry weight of cellulose in the viscose) of a protein such as casein is added to the spinning solution. TTD: 11-47

Fiber crimping. Sandoz, Ltd. Brit. P. 582 427. *Textile Mfr. 73,* 291 (June, 1947).

A crimp that is stable to boiling in alkaline soap solutions, is imparted to cellulosic fibers, filaments, and threads by subjecting the fibers to the action of mechanical devices and stabilizing by treatment with hardening agents such as formaldehyde and then heating to about 150°C. TTD: 11-47

Staple fiber production. J. L. Lohrke. Brit. P. 582 949. *Textile Mfr. 73,* 243 (May, 1947).

In converting a sliver of filaments into a sliver of staple fibers the sliver is continuously advanced, and progressive portions of the sliver having a length greater than the length of the staple fibers desired are continuously tensioned. The tensioned sliver is intermittently deflected out of its path to break the filaments progressively at the points of deflection without destroying the continuity of the sliver. The stapilizing apparatus consists essentially of sets of feed and delivery rolls to which the sliver is fed and from which it is withdrawn respectively, the sliver being fed to the feed rolls at a given speed and then withdrawn at the delivery rolls at an increased speed. TTD: 11-47

Swelling of fibers. Process for decreasing swelling capacity of textiles during washing. Roehm u. Haas G.m.b.H. French P. 896 878, Mar. 6, 1945. *Chimie et Industrie 56,* No. 4, 306 (Oct. 1946).

Textiles manufactured from cellulose hydrate are impregnated with an acidic solution of a condensation product obtained from 1 mol of urea and a total of 2-4 mols of acrolein and formaldehyde. The textiles are dried between 80° and 120°C, and then treated with a bath containing metallic fluorides. TTD: 11-47

Rayons I 3 a

Carboxylated rayons. Action of acrylonitrile on viscose. J. P. Hollihan & Sanford A. Moss, Jr., Am.

Viscose Corp. *Ind. Eng. Chemistry 39,* 929-30 (July, 1947).

The addition of acrylonitrile to viscose solutions produces carboxy ether derivatives, suitable for yarns in specialized fabrics. These yarns have a greater swelling capacity in water than normal rayon, have an increased dye pickup, are alkaline, and are reduced in strength.
TTD: 11-47

Formaldehyde-treated rayon. Behavior of rayon when treated with formaldehyde. A. Richter. *Melliand Textilber. 27,* No. 8, 269-73 (Nov. 1946); *Chimie et Industrie 58,* No. 2, 174 (Aug. 1947).

In order to increase its durability, rayon is treated with formaldehyde, thus decreasing the tendency to swell because of the formation of bridges of polyoxymethylene between the cellulose molecules. This process is entirely empirical and it is impossible to predict the result of formaldehyde treatment by an x-ray examination of a known rayon. Preliminary formaldehyde tests must be made for every quality of rayon. TTD: 11-47

Rayon. Continuous rayon spinning process. Anon. *Chem. Eng. 54,* No. 11, 103 (Nov. 1947).

In the Kuljian process viscose is spun and the yarn processed and dried by means of 8 parallel rollers around a central shaft. The yarn is carried from one end of the rollers to the other by a slight skew of the rollers. Processing liquids are dropped onto the yarn, the excess being drawn off through the hollow rollers.
LCL TTD: 11-47

Rayon. Characteristics of rayon fibers and raw cellulose. Anon. *Industria (Bull. ind. Uff. Informazioni S. U.),* No. 7, 1946; *La Chimica e L'Industria 29,* No. 1, 18 (Jan. 1947).

The different theories of the structure of cellulose are reviewed, with special reference to the work done by Nickerson. TTD: 11-47

Cuprammonium spinning. Rayonier, Inc. Brit. P. 581 366. *Textile Mfr. 73,* 195 (Apr. 1947).

In a method for recovering the reagents used in the cuprammonium spinning process, Cu, as copper oxide, is separated from the spent setting bath and then the copper oxide is mixed with sulfuric acid wash liquor to convert the oxide to $CuSO_4$ without leaving an excess of H_2SO_4 in solution. TTD: 11-47

Saponifying acetate. Brit. Celanese, Ltd. Brit. P. 581 947. *Textile Mfr. 73,* 241 (May, 1947).

Cellulose acetate filaments or fibers are completely saponified by treatment with 0.6-1 wt.% NaOH and an inorganic salt that inhibits swelling. In an example,

bobbins of 100 denier, 26 filament acetate yarn are immersed for 1 hr. in a bath containing 0.6 wt.% NaOH and 20% Na_2SO_4 heated to 80°C. After washing and drying the yarns have a denier of 65 and a dry tenacity and a dry and wet breaking load higher than yarns saponified without the presence of Na_2SO_4.
TTD: 11-47

CONTROL OF SWELLING OF VISCOSE RAYON. Anon. Field Information Agency, Technical, Report No. 652; price 1s 7d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

Protein fibers — I 3 b

Protein fiber structure. Structure of protein fibers. Frederic R. Senti, Eastern Regional Research Laboratory. *Am. Dyestuff Reptr. 36,* 230-7 (May 5, 1947).

A discussion of the structure of natural and artificial protein fibers, including silk and wool, is presented in a paper. TTD: 11-47

Rayon alginates. Sea silk. Anon. *Ind. Eng. Chemistry 39,* No. 7, 5A, 8A (July, 1947).

The properties and uses of alginate rayons are reviewed, and the Speakman process of production is discussed.

Synthetic fibers — I 4

Nylon. Many uses of nylon. F. Millard, Brit. Nylon Spinners, Ltd. *Wool Record & Textile World 71,* 651 (Mar. 27, 1947).

A summary of a lecture on the uses and physical properties of nylon. TTD: 11-47

Synthetic fibers. Necessity for developing new sources of raw materials for synthetics. H. Levinstein. *Fibres, Fabrics & Cordage 14,* 312 (July, 1947).

A lecture on the sources of synthetic fibers and rayon. The utilization of plant and organic life rather than mineral sources of coal and oil is discussed.
TTD: 11-47

Nylon spinning. Imperial Chemical Industries, Ltd. Brit. P. 581 390. *Textile Mfr. 73,* 195 (Apr. 1947).

In the melt spinning of nylon type filaments, a stream of inert gas is passed through the molten mass prior to extrusion in order to reduce the objectionable drip formation at the spinneret. TTD: 11-47

Elastic nylon. J. R. Lewis (to Imperial Chemical Industries, Ltd.). Brit. P. 583 014. *Textile Mfr. 73,* 292 (June, 1947).

Elastic nylon filaments, bristles, and the like are produced

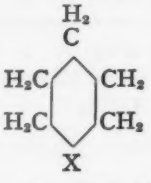
by drawing in the presence of an alcohol, formaldehyde (as a vapor) and an acidic catalyst. In an example a yarn composed of filaments of polyhexamethylene adipamide, cold-drawn to 4 times the original length, of 44 denier, is steeped in a 30% glycollic acid solution for 10 min. at 60%C, squeezed and air dried at about 30°C. The yarn thus treated is preheated to about 120°C, exposed to the mixed vapors of formaldehyde and methanol (in a ratio of 35:65) for 15 min. at 110°C, washed and dried in air. TTD: 11-47

Synthetic fibers. Polycondensation products and process for their preparation. Deutsche Hydrierwerke A. G. French P. 889 239, Jan. 4, 1944. *Chimie et Industrie 56,* No. 2, 129 (Aug. 1946).

Equimolecular quantities of adipic acid and a diamine, such as 4, 4′-di-(aminobenzoyl)-1, 6-hexamethylenediamine, are condensed to form an elastic, vitreous compound, which can easily be spun into fibers. TTD: 11-47

Synthetic fibers. Polycondensation products and process for their preparation. Deutsche Hydrierwerke A. G. French P. 889 287, Jan. 15, 1944. *Chimie et Industrie 56,* No. 2, 129 (Aug. 1946).

Diamines, glycols or their mixtures are combined with dicarboxylic acids containing a substituted or nonsubstituted nucleus of the formula:



wherein X is O, S, or the group NR, in which R is H or an organic radical. The resulting polycondensation product is very elastic, and can easily be spun into fibers, either in solution or in the molten state. TTD: 11-47

Synthetic fiber treatment. Process for rendering animal, vegetable and synthetic fibers resistant to acids and bases. M. Calosso. French P. 897 430, Mar. 21, 1945. *Chimie et Industrie 56,* No. 6, 490 (Dec. 1946).

The material to be treated is impregnated with a solution prepared by adding dilute NaOH and hexamethylene-tetramine to a solution of phenol and formaldehyde. TTD: 11-47

Synthetic fibers. Manufacture of synthetic compounds. Soc. Ind. Chim. Basle. French P. 908 489, Apr. 10, 1946. *Chimie et Industrie 57,* No. 2, 161 (Feb. 1947).

Amides having an aliphatic or cycloaliphatic radical containing at least 8 C atoms attached to the N atom are condensed with formaldehyde and with a sulfonic acid, a hydroxypolycarboxylic acid, polyhydroxyl compounds or their ether oxides containing an alcoholic hydroxyl group attached to a chain of at least 2 C atoms. These condensation products are spun into threads, fibers, etc. TTD: 11-47

Fiber processing I 6

Impregnating fibers. H. P. Bayon. Brit. P. 581 391. *Textile Mfr. 73,* 195 (Apr. 1947).

Fibers are impregnated with liquids or vapor by apparatus consisting of a jacketed vessel in which rotates a perforted basket supported on a hollow shaft, scoops being provided on the lower part of the basket to pick up the liquid and circulate it. TTD: 11-47

Oiling rags. L. Marbach (to Petrie & McNaught, Ltd.). Brit. P. 581 958. *Textile Mfr. 73,* 241 (May, 1947).

Rags that are to be used subsequently in the production of yarn or flocks are immersed in an emulsion containing a lubricant and then squeezed to remove excess liquid, and finally dried. TTD: 11-47

INORGANIC FIBERS II

Glass fibers. Glass fibers and fabrics. C. S. Jones. *Indian Textile J. 57,* 339-40 (Jan. 1947).

Manufacture, dyeing, and uses of glass fibers and fabrics are reviewed. TTD: 11-47

Uniform glass fibers. Owens-Corning Fiberglas Corp. Brit. P. 582 472. *Textile Mfr. 73,* 291 (June, 1947).

Apparatus for spinning fine, continuous glass fibers comprises a pair of glass melting bushings, side by side, electrically connected in series so that each bushing serves as a return lead for the current passing through the other. A uniform viscosity is thus secured in the glass in each bushing. TTD: 11-47

FIBER TO YARN III

Fiber preparation III 1

Bast fibers. Working of various hard fiber tows. Anon. *Fibres, Fabrics & Cordage 14,* 306 (July, 1947).

Details of working manila, sisal, hemp, and istle from the opening to the spinning of the fibers are given. TTD: 11-47

Card drive. Synchronous drive for carding machines. Anon. *Engineering 161,* 368 (Apr. 19, 1946).

A brief description is given of an installation of an under-floor synchronous drive for carding machines of the type commonly used with cotton, but adaptable for carding wool. TTD: 11-47

Condensers. Woolen condensing. Anon. *Wool Record & Textile World 71,* 684-5, 758, 760, 762 (Apr. 3, 10, 1947).

To obtain compact slivers capable of bearing tension during spinning, woolen fibers, delivered by the last swift of the carder, are condensed. Ring doffer condensers and tape condensers are discussed. TTD: 11-47

Drawing. High draft—technique and application. R. Porter. *Textile Mfr. 73,* 208-11 (May, 1947).

A lecture on the technique and application of various types of high drafting systems. TTD: 11-47

Drawing worsted. Problem in worsted drawing. Anon. *Wool Record & Textile World 71,* 764-5, 768, 770 (Apr. 10, 1947).

A discussion of the variations in different sets of drawing for worsted top. TTD: 11-47

Flax machinery. Modern flax preparing machinery. Anon. *Fibres, Fabrics & Cordage 14,* 66-7, 114, 119, 169-70 (Feb.-Apr. 1947).

Descriptions of the hackling machine, Eves patent push-bar-type drawing frame, and the Heilmann-type flax tow combing machines for processing flax fibers are given with illustrations. TTD: 11-47

Neppiness in yarns. Neppiness in Indian cotton yarns. A. N. Gulati, Technological Laboratory (Bombay). *Indian Cotton Growing Rev. 1,* 60-3 (Apr. 1947).

The author concludes that neps can be reduced by eliminating strains of cotton containing excessive amounts of immature hairs, selecting hard-seeded and more mature cottons, clean picking, determining most suitable settings of ginning and blow-room machinery, and card engines, designing more efficient nep-removing devices on reeling machines, and adopting suitable dyeing techniques to cover dyeing defects caused by the presence of neps. TTD: 11-47

Speed frame maintenance. Repairing and resetting speed frames. E. Taylor. *Textile Mfr. 73,* 265, 267 (June, 1947).

A review of the maintenance of the cotton speed frame. TTD: 11-47

Comber. J. T. Bunting (to Fine Cotton Spinners' & Doublers' Assn., Ltd.). Brit. P. 581 646. *Textile Mfr. 73,* 196 (Apr. 1947).

Locking covers of guards on fencing machinery, particularly for combers such as a Nasmith, prevent removal of the guards until all motion has ceased. TTD: 11-47

Draw-off device for cards. M. Waller (to Platt Bros. & Co., Ltd.). Brit. P. 581 851. *Textile Mfr. 73,* 197 (Apr. 1947).

A draw-off mechanism for handling a fleece between scribblers or carding engines. TTD: 11-47

Spinning III 3

Spinning rayon. Spinning long rayon staple fiber. S. A. G. Caldwell. *Textile Mfr. 73,* 168-9, 217-19, 259-61 (Apr.-June, 1947).

A discussion of the various systems on which rayon staple is spun and the advantages of a special range of machinery. The flat and roller and clearer card is discussed as to its efficiency and functions, and processing rayon staple in blends and alone is reviewed. TTD: 11-47

Worsted spinning. Output in worsted spinning. Anon. *Wool Record & Textile World 71,* 698-700 (Apr. 3, 1947).

Methods of increasing the output per machine in worsted spinning are described. TTD: 11-47

Worsted spinning. Worsted spinning—Scaife motion. C. Brook. *Textile Mfr. 73,* 266-7 (June, 1947).

A method of calculation of the Scaife motion on worsted spinning frames is described. TTD: 11-47

Worsted spinning. Yarn reeling in worsted spinning. G. E. Sheard. *Textile Mfr. 73,* 159-60, 176 (Apr. 1947).

Allowances must be made for the condition of the yarn as it is reeled. The machine calculations and operations involved are discussed. TTD: 11-47

Ring frame builder motion. J. Lang (to Tweedales & Smalley, Ltd.). Brit. P. 581 519. *Textile Mfr. 73,* 195-6 (Apr. 1947).

An improved cop shaping arrangement for ring spinning frames enables more yarn to be wound on by reducing the length of the taper at the base of the cop. TTD: 11-47

Mule setting-on rod. A. Fairbrother & T. Howarth. Brit. P. 582 224. *Textile Mfr. 73,* 242-3 (May, 1947).

An automatic locking device for the setting-on rods of spinning mules consists essentially of a spring-controlled latch mounted on top of the setting-on rod so that the rod cannot be raised to release the "off" slot from the

bracket while the rod is in the "off" position.
TTD: 11-47

Wiping-down motion. R. R. A. Hurst & H. W. Dean. Brit. P. 582 286. *Textile Mfr. 73,* 290 (June, 1947).

An automatic wiping-down motion is provided for wiping the roller beam and carriage of spinning mules.
TTD: 11-47

MODERNIZATION IN COTTON SPINNING INDUSTRY. Anon. Cotton Board, Midland Bank Bldg., Spring Gardens, Manchester 2; price 2s 6d.

Reviewed in *Fibres, Fabrics & Cordage 14,* 300-1 (July, 1947). TTD: 11-47

Winding III 4

Pirn winder doffing. Maschinenfabrik Schweiter A. G. Brit. P. 581 748. *Textile Mfr. 73,* 196 (Apr. 1947).

In a method for automatic doffing of pirns, after the spindle and thread guide are at rest, the thread is seized above the cop, which has been pushed off the spindle, by means of catch notches on the spindle point and is then held between the spindle point and a movable support for the free end of the spindle. The thread is cut above the cop to free it so that when winding is resumed the thread is wound up on the spindle, its end clamped between the spindle point and the support, forming a loop projecting from the interior of the cop being wound. TTD: 11-47

Pirn winder doffing. Maschinenfabrik Schweiter A. G. Brit. P. 581 759. *Textile Mfr. 73,* 196-7 (Apr. 1947).

In an automatic cop winder a slidable spindle for the cop is arranged with the rear end rotatable in a slide, mounted on a guide and connected by a draw-rope with a "pusher" for the free end of the spindle. The winding and automatic ejecting of the cops are controlled by a series of cams on a cam shaft. TTD: 11-47

Winder stop motion. Am. Viscose Corp. Brit. P. 581 953. *Textile Mfr. 73,* 241 (May, 1947).

On a winding machine a stop motion stops the machine when the package has reached a predetermined size.
TTD: 11-47

Yarn processing III 5

Yarn treatment. Alvin Lodge (to Am. Viscose Corp.). USP 2 424 403, July 22, 1947.

A chamber has a flexible sealing member and an inlet and outlet for the treating material for the purpose of treatment of a continuously running article of indefinite

length having at least one dimension of comparatively small magnitude, such as yarn, tape, ribbon or the like. The flexible sealing member provides for the entrance and exit of the material to be treated without any appreciable loss in the treating fluid.
SPH TTD: 11-47

Thread advancing reel. Adrian J. L. Moritz (to Am. Enka Corp.). USP 2 424 489, July 22, 1947.

A reel upon which a thread-like material, similar to freshly spun rayon, nylon, Vinyon or the like, may be wound in a helical form for treatment in a liquid bath or the like, is so constructed that the yarn or thread may be continuously fed to the surface of the reel near one end as the real turns. Rotation of the reel causes the yarn to be moved along the reel in an axial direction a small amount for each revolution of the reel. Thus a continuous helix of thread is formed on the reel which slowly moves along the reel axially as the reel turns. A modification of the device which is conical in shape instead of cylindrical allows the material to shrink while being treated.
SPH TTD: 11-47

POSITEX APPLIED TO COTTON, LINEN, SISAL OR JUTE YARNS AND FABRICS. C. M. Blow. British Rubber Development Board, 19 Fenchurch St., London, E. C. 3; 12 pp.

Reviewed in *Fibres, Fabrics & Cordage 14,* 406 (Sept. 1947). TTD: 11-47

Yarn products III 6

Nylon cordage. Properties of nylon cordage. Anon. *Textile Mfr. 73,* 268-9 (June, 1947).

A review of some of the properties and uses of nylon ropes and cords. TTD: 11-47

Rope. Practical rope maker. Anon. *Fibres, Fabrics & Cordage 14,* 69-71, 120-4, 162-5, 206-9, 264-8, 302-6, 351-8, 386-90 (Feb.-Sept. 1947).

Various aspects of rope making are described in detail including batching, drawing, spinning, etc. Calculations for rope making are discussed, and the working of soft hemp for cordage is reviewed. TTD: 11-47

Rope. Nip and nippers—their influence on good rope making. H. W. Moran. *Fibres, Fabrics & Cordage 14,* 72-4 (Feb. 1947).

The importance of correct nipping in the production of rope, from the first process of hackling through spinning, is discussed. TTD: 11-47

GERMAN SEWING THREAD MANUFACTURE AT ZWINEREI ACKERMAN A. G., SONTHEIM. Anon. Field Information Agency, Technical, Report No. 308; price 1s 1d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

YARN TO FABRIC IV

Yarn preparation IV 1

Warp sizing. Eire develops starch-sludge plus casein size for cotton and linen yarns. Anon. *Fibres, Fabrics & Cordage 14,* 269 (June, 1947).

The use of wheat starch sludge with casein for warp sizing is briefly discussed. TTD: 11-47

Warping. Precision processing. D. R. H. Williams. *Wool Record & Textile World 71,* 742, 744, 746-7 (Apr. 10, 1947); *Textile Mfr. 73,* 213-15 (May, 1947).

Improvements in warping machinery that control the tension of individual threads and the warp itself are discussed. TTD: 11-47

Looms IV 2 a

Automatic looms. Swiss fittings which automatize ordinary looms. Anon. *Fibres, Fabrics & Cordage 14,* 221 (May, 1947).

The conversion of non-automatic looms to automatic is briefly discussed. TTD: 11-47

Loom timing. Timing loom motions. D. C. Snowden, Leeds Univ. *Wool Record & Textile World 71,* 822, 824, 826 (Apr. 17, 1947).

Various methods for timing loom motions are discussed. A gauge is described that can time the motions in the pick cycle. TTD: 11-47

Sulzer loom. Swiss pirnless loom which weaves up to 150" cloth. Anon. *Fibres, Fabrics & Cordage 14,* 172-3 (Apr. 1947).

A brief illustrated description of a new Sulzer loom for weaving wide widths. TTD: 11-47

Warp beam lifting. Clarence R. Kronoff (to Crompton & Knowles Loom Works). USP 2 424 400, July 22, 1947.

A let-off mechanism, based on a pending patent (application serial no. 686 294, filed July 26, 1946) consists of 2 chains in mesh with sprockets on the warp beam. These chains are driven by a separate motor. Certain additional features provide means for lifting the warp beam from the dolly, on which it is transported, to its support on the loom frame. This is accomplished by driving the let-off chains in the reverse direction. Means for reversing the driving motor are provided.
SPH TTD: 11-47

Picker stick strap lug. Alvin N. Ayers & Liday E. Hamilton, Sr. USP 2 424 427, July 22, 1947.

An improved form of picker stick strap lugs for looms, is designed and constructed so as to eliminate wear on the strap and on the lug and to prevent the lug from shifting laterally or becoming twisted on the picker stick in the event the clamping bolt becomes loose. The design is such that the lug can be constructed of wood or metal such as an aluminum alloy. Five forms of the lug are illustrated.
SPH TTD: 11-47

Loom protection rod. Harold Hoeber (to Textile Research Co.). USP 2 424 461, July 22, 1947.

An improved protection rod which extends along the lay provides for adjusting the 2 ends of the rod in accurate angular relation by means of an adjustable coupling.
SPH TTD: 11-47

Picker stick drive. J. E. Roig. Brit. P. 581 430. *Textile Mfr. 73,* 195 (Apr. 1947).

A driving mechanism for picker sticks. TTD: 11-47

Shuttle tip. J. P. Ireland (to J. Ireland & Sons, Ltd.). Brit. P. 581 532. *Textile Mfr. 73,* 196 (Apr. 1947).

A shuttle has a metallic tip with one or more shanks embraced by a spring collar that abuts against the rear face of the tip, gripping the shank and biting into the shuttle body so as to prevent displacement of the tip. TTD: 11-47

Hand-threaded shuttle. J. Holden. Brit. P. 581 823. *Textile Mfr. 73,* 197 (Apr. 1947).

In a hand-threaded shuttle a recess in the side breaks into the outer limb of the U-shaped channel to form the eye. One of 2 upright ends (fixed across the channel to receive the thread), behind the point of opening of the channel limb into the front part of the recess, is spaced away from the base of the recess and so bent that the thread, upon engagement, is brought close to the mouth of the recess where it can be grasped readily. TTD: 11-47

Warp-shedding device. E. Cotterill (to Courtaulds, Ltd.). Brit. P. 582 064. *Textile Mfr. 73,* 241-2 (May, 1947).

A warp-shedding mechanism for weaving cross-woven fabrics consists essentially of an assembly of discs arranged in a row for joint movement about a common axis. TTD: 11-47

Loom crank shaft. I. S. Porter (to Wilson & Longbottom, Ltd.). Brit. P. 582 239. *Textile Mfr. 73,* 290-1 (June, 1947).

A forward and reverse device for the crank shaft of a loom has as integral parts 2 epicyclic gears, each surrounded by a 2-armed brake band. TTD: 11-47

Control devices — IV 2 b

Stop motions. Weft stop motions. D. C. Snowden, Leeds Univ. *Wool Record & Textile World 71,* 510, 512, 514 (Mar. 13, 1947).

Weft stop motions are discussed, and details of operation of center weft fork stop mechanisms are given.
TTD: 11-47

Cutting splits. H. & A. Travis & K. Fuchs. Brit. P. 582 098. *Textile Mfr. 73,* 242 (May, 1947).

Through a simplified method the weft threads are separated at the splits in the width of the fabric while in the loom by means of a knife carried in a bracket on the loom sley and projecting through a guide slot in a bracket secured to the breast beam. TTD: 11-47

Selvedge thread tensioning. R. Dewas. Brit. P. 582 397. *Textile Mfr. 73,* 291 (June, 1947).

In a method of tensioning the selvedge threads, the warp threads after unwinding are divided into 2 parts, the one part, comprising selvedge threads, being subjected to the action of a stretching device, which is a basket-shaped weight, the other part, the rest of the warp threads, being carried directly to the back rest.
TTD: 11-47

Fabric construction — IV 2 c

Ventile fabrics. Ventile cotton cloth. Anon. *Fibres, Fabrics & Cordage 14,* 224 (May, 1947).

Ventile cotton fabrics are woven from soft-twisted, long-staple, cotton yarns. The close weave and swelling of the yarns in addition to a partial proofing make this fabric an exceptionally good rainproof cloth.
TTD: 11-47

Weave designs. Creative yarn design. Anon. *Ambassador,* No. 5, 112-13 (1947).

A brief review of designs in fabrics obtained by blending, twisting, weaving, etc. Illustrated examples are given to show various yarn combinations and finishes.
TTD: 11-47

Weave designs. Woolen and worsted dress fabrics. Saxony costume cloths for export. Shetland and homespun tweeds. Utility tweeds for men's wear. Portex. *Wool Record & Textile World 71,* 443, 446, 505, 508, 569, 572, 631-2 (Mar. 6, 13, 20, 27, 1947).

Construction details and fabric designs and colors of woolen and worsted dress fabrics, costume cloths and suitings are described. TTD: 11-47

Weave effects. Modern trends in weave design. Weave design in coating tweeds. Shaded stripes and checks. Woolen and worsted suitings. Portex. *Wool Record & Textile World 71,* 693, 696, 755-6, 817, 820, 879-80 (Apr. 3, 10, 17, 24, 1947).

The weaving of woolen and worsted cloths is discussed, with details of design and structure given.
TTD: 11-47

Controlling shrinkage. Shrinkage in silk parachute fabrics. Srinagabhushana, Sri Krishnarajendra Silver Jubilee Technological Inst. *Textile Mfr. 73,* 228-31 (May, 1947).

By adjusting yarn twists in the warp or weft direction or in both directions in a silk fabric shrinkage may be controlled, according to some tests that have been undertaken. TTD: 11-47

Weaving terry towels. Automatic weaving of terry towels. T. Hargreaves. *Textile Mfr. 73,* 166-7, 224-5 (Apr., May, 1947).

A discussion of terry towel weaving with details of the specially constructed Crompton and Knowles jacquard and details of the designing of a towel with colored pile on the face and white pile on the back.
TTD: 11-47

GOOD DESIGN—GOOD BUSINESS. John Gloag. H. M. Stationery Office, Edinburgh; 78 pp.; price 1s 6d.

Reviewed in *Fibres, Fabrics & Cordage 14,* 399 (Sept. 1947). TTD: 11-47

Knitting — IV 3

Fabric construction. Knitted fabric analysis. Seamless hosiery and reverse plating design. Tuck-float rib fabric and knitted transfer stitch. H. Wignall. *Textile Mfr. 73,* 164-5, 232-4, 270-1 (Apr.-June, 1947).

Methods of determining details and counts of knitted fabrics, details of seamless hosiery construction and their designs, and the construction of self-colored knitted designs on circular rib machines are described.
TTD: 11-47

Hosiery knitting. Eugene St. Pierre (to Hemphill Co.). USP 2 424 516, July 22, 1947.

An improved suture, especially suitable for sheer hosiery of fine quality such as may be knitted on a Banner type circular knitting machine, joins the leg and foot portions of a stocking, the yarns in the suture being so arranged that the suture is thereby stronger than the adjacent loops so that failure of the suture is eliminated.
TTD: 11-47

Knitting inturned welt. Hemphill Co. Brit. P. 582 994. *Textile Mfr. 73,* 291-2 (June, 1947).

In knitting an inturned welt on a circular, independent

needle knitting machine the yarn is fed to spaced needles and over points of transfer bits and the fabric knitted on all needles throughout an extent sufficient for an inturned welt, loops held on transfer bits being then transferred to the same needles upon which yarn was initially taken. TTD: 11-47

Knitting. Hemphill Co. Brit. P. 583 019. *Textile Mfr. 73,* 292 (June, 1947).

In producing an inturned welt on a circular, independent needle knitting machine loops are tranferred from transfer bits to needles by causing one blade of each bit to move inwardly in advance of the other blade of the same bit so that the yarn slips from one blade before disengaging from the other. TTD: 11-47

Special fabrics IV 4

Braids. Braided and plaited cords. Frederick Grossman. *Fibres, Fabrics & Cordage 14,* 76-9, 86 (Feb. 1947).

Production of braids, with details of the mechanics of the braiding machine, different types of braiders, and principal braided products, is reviewed.

TTD: 11-47

Chenille fabrics. Chenille in India. Orun K. Bosu. *Indian Textile J. 57,* 728-9, 735 (May, 1947).

A discussion on the technique of manufacture, uses, properties, and raw materials used for chenille fabrics. Prospects for chenille manufacture in India are also reviewed. TTD: 11-47

Net. Leonard P. Frieder & Walter S. Finken. USP 2 423 308, July 1, 1947.

A net of special construction consists of rings each of which is interlocked with 4 other rings. The edges of the net are bound by a border braid which has braided handles at intervals. The rings are made of hollow center cords telescopically spliced in such a way that each ring is joined so that no mousing is needed. The material is 5000-lb.-test braided nylon or the like
SPH TTD: 11-47

Fabric tube. Chas. S. Hyatt & Harold H. Brooks (to Columbus Coated Fabrics Corp.). USP 2 424 315, July 22, 1947.

A fabric tube is constructed of one or more layers of fabric held together by means of a thermoplastic material so that the completed tube is impermeable for ordinary fluids. A method of manufacture is indicated.
SPH TTD: 11-47

Zipper tape. John V. Moore (to Moore Fabric Co.). USP 2 424 411, July 22, 1947.

A curvilinear zipper tape with the bead on the short or

concave side is produced by using a tapered warp beam and spacing the warp threads more closely together on the large end of the beam. By using a tapered warp beam and a tapered take-up roll the tape as woven is longer on one side than on the other and has a permanent non-elastic curve.
SPH TTD: 11-47

Flexible tubing. John Frier. USP 2 424 445, July 22, 1947.

By a novel device, flexible tubing (*e. g.,* textile tubing) is coated, the excess coating material wiped off and the tubing opened or expanded. An endless belt having arms provided with hooks is arranged to draw several sections of tubing through the coating bath and then a perforated wiping member. The tubing is opened by means of a small piece of metal in the form of a dumbbell inserted inside the tube and placed in the wiping member with one large end above and the other below the wiping member. The ends of the dumbbell are too large to pass through the wiping member. The wiping member is split for easy assembly.
SPH TTD: 11-47

Fabric processing IV 5

Electronic devices. Electronics in textile industry. Anon. *Fibres, Fabrics & Cordage 14,* 294-5 (July, 1947).

Two electronic devices used in fabric processing are described and illustrated. The Fielden hygrometer determines moisture content in drying cylinders, stenters, tentering machines, and warp sizing machines. The G. E. Photocell counting control measures the amount of fabric passing through a calender. (*Cf.* TTD *4,* 235.) TTD: 11-47

Steaming fabrics. Process for steaming fabrics. R. Hofmann. French P. 53 811 (Addition to French P. 904 983), Sept. 9, 1946. *Chimie et Industrie 57,* No. 4, 378 (Apr. 1947).

Steam is passed through the steaming apparatus in a closed circuit and is constantly freed of O by means of reducing agents. TTD: 11-47

Fabric applications IV 6

Surgical materials. Silk and cotton in surgery. Waldemar Schweisheimer. *Indian Textile J. 57,* 341-2 (Jan. 1947).

The use of silk, cotton, and nylon for surgical dressings is discussed. TTD: 11-47

Coated fabric. W. H. Moss. Brit. P. 581 938. *Textile Mfr. 73,* 197 (Apr. 1947).

Fabric for use in collapsible containers such as airplane

fuel tanks is coated with a soft, nonsticky coating that may be hardened by evaporation of a solvent so as to stiffen the fabric. Such a coating comprises a carboxylic acid ester of cellulose or a cellulose ether together with a solvent for the cellulose derivative having a boiling point of at least 150°C. TTD: 11-47

Rayon tire covers. J. W. Illingworth & E. W. Madye (to Dunlop Rubber Co., Ltd.). Brit. P. 582 210. *Textile Mfr. 73,* 242 (May, 1947).

In the manufacture of rubber-rayon products such as tire covers, a vulcanizable rubber composition containing an aldehyde resin (not more than 5 wt.% of the cellulose content of the viscose) is applied to viscose yarns and then vulcanized. TTD: 11-47

CHEMICAL RAW MATERIALS V

Plastics and elastomers V 1

Adhesive. Bond-It adhesive. Anon. *India Rubber World 116,* 653 (Aug. 1947).

A brief description of a new thermosetting elastic cement, Bond-It, which is used for bonding natural and synthetic rubbers to rayon, nylon, or cotton fabrics, yarns, fibers, etc. TTD: 11-47

Elastomer. Lactoprene EV elastomer curing recipes and properties. W. C. Mast, T. J. Dietz, R. L. Dean, & C. H. Fisher, Eastern Regional Research Laboratory. *India Rubber World 116,* 355-60 (June, 1947).

Properties and processing of Lactoprene EV are discussed. This elastomer is useful for printing rolls, oil-resistant gloves and fabrics, coated cloth, etc. TTD: 11-47

Masking agent. Aromatics for vinyl compounds. Anon. *India Rubber World 116,* 680 (Aug. 1947).

A brief note on Res-O-Dors, aromatics and masking agents, used in polyvinyl resin coatings to eliminate any obnoxious odor from plasticizers. TTD: 11-47

Plasticizer. New plasticizer. Anon. *India Rubber World 116,* 517 (July, 1947).

Properties of Plastofries 62, a plasticizer for nitrocellulose in the fabric coating industry, are briefly given. TTD: 11-47

Plasticizer. New plasticizers. Anon. *India Rubber World 116,* 653 (Aug. 1947).

Two new plasticizers for polyvinyl chloride stocks are Monoplex 11 and Monoplex 16. Some suggested uses

are for rainwear, upholstery, coated fabrics, etc. TTD: 11-47

Plasticizer. New Vinyl plasticizer. Anon. *India Rubber World 116,* 375 (June, 1947).

A brief note on Plastoflex No. 5, a plasticizer for polyvinyl chloride, polyvinyl chloride-acetate, acrylic polymers, etc. TTD: 11-47

Rug-backing. Rug-backing compounds. Anon. *India Rubber World 116,* 550 (July, 1947).

A new rubber-plastic compound, Griptex, that forms a strong-flexible film to the backs of rugs is noted. Griptex prevents rugs from sliding on polished floors and keeps the pile from pulling out. TTD: 11-47

Sulfonamides. Sulfonamide plasticizers and resins. Howard S. Bergen, Jr. & J. Kenneth Craver, Monsanto Chemical Co. *Ind. Eng. Chemistry 39,* 1082-7 (Sept. 1947).

A discussion of the preparation, properties and uses of sulfonamide plasticizers and resins. TTD: 11-47

Plasticizing acetate. Brit. Celanese, Ltd. Brit. P. 581 313. *Textile Mfr. 73,* 195 (Apr. 1947).

A fabric containing cellulose-derivative thermoplastic and non-thermoplastic fibers is treated in a dispersion of triethyl citrate in order to plasticize the thermoplastic fibers. TTD: 11-47

Surface-active compounds V 2

Detergents. Report on synthetic detergents. John W. McCutcheon. *Chem. Industries 61,* 811-24 (Nov. 1947).

A comprehensive report on detergents, giving properties, etc., and including an extensive table of known products.
LCL TTD: 11-47

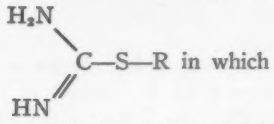
Olein. Examination of olein. Kehrens. *Melliand Textilber. 27,* No. 8/9, 226-8, 310-12 (Nov., Dec. 1946); *Chimie et Industrie 58,* No. 2, 175 (Aug. 1947).

Among the saponifiable fats and oils, oleins are particularly suitable for lubricating fabrics, because their unsaponifiable content should not be greater than 2%, and their iodine numbers should be low. These values can be determined in the usual manner. TTD: 11-47

Softening agents. Textile softening agents and process for their preparation. I. G. Farbenindustrie A. G. French P. 897 052, Mar. 12, 1945. *Chimie et Industrie 56,* No. 6, 490 (Dec. 1946).

Thiourea is reacted with alkyl halides containing at

least 8 C atoms to form softening agents of the formula:



R represents an alkyl radical containing at least 8 C atoms. TTD: 11-47

PRACTICAL EMULSIONS. H. Bennett. 2nd Edition. Chemical Publishing Co., Inc., 26 Court Street, Brooklyn 2, N. Y.; 568 pp.; price $8.50.

Reviewed in *Fibres, Fabrics and Cordage 14,* 315 (July, 1947). TTD: 11-47

CHEMICAL PROCESSING VI

Finishes. Replacement of starch in finishing textile fibers and fabrics. Anon. *Am. Dyestuff Reptr. 36,* 166-74 (Apr. 7, 1947).

Starches, gums, alkyd and styrene resins are compared as to their properties and as finishing and sizing agents. TTD: 11-47

Finishing. Improvements in textile finishing. C. S. Jones. *Indian Textile J. 57,* 825-7 (June, 1947).

Developments in textile finishing are discussed. TTD: 11-47

Finishing agents. Water-resistant finishing agents. L. Hermann, L. Honig & G. Sander. Magyar Kemik Lapja (*J. Hungarian Chem. Soc.*) *1,* No. 4, 63-6 (Oct. 25, 1946); *Chimie et Industrie 58,* No. 2, 175 (Aug. 1947).

Commercial finishing agents with cellulose or synthetic resin bases are described. TTD: 11-47

Finishing rayon. Finishing rayon. W. Brunschmidt. *Melliand Textilber. 27,* No. 8, 273-6 (Nov. 1946); *Chimie et Industrie 58,* No. 2, 174 (Aug. 1947).

The best method consists in a preliminary calendering treatment. The fabric is then cleaned and treated with a sulfonate bath to prevent shrinkage of the finish. It is next dyed, dried, and treated with the finishing agent which contains a soupling compound, such as a sulfonated alcohol. TTD: 11-47

Fabric finishing. Heberlein & Co., A. G. Brit. P. 581 418. *Textile Mfr. 73,* 195 (Apr. 1947).

Prior to impregnation with formaldehyde solutions fabrics are treated with softening finishing agents. TTD: 11-47

Transparent fabric. Heberlein & Co., A. G. Brit. P. 581 436. *Textile Mfr. 73,* 195 (Apr. 1947).

Cellulosic fabrics are made transparent by impregnating

with alkaline solutions, containing cellulose zincate, and then mercerizing. In an example, bleached, mercerized cotton muslin is printed with a solution of cellulose in sodium zincate containing 5% cellulose, 2.5% zinc oxide and 7.5% total alkali (calculated as NaOH), and then dried. Next the fabric is impregnated with caustic soda solution, allowed to stand 5 min. without tension, washed free of lye, scoured with dilute H_2SO_4, washed, and dried under slight tension. TTD: 11-47

Finishing. Textile finishing. Calico Printers' Assn., Ltd. Swed. P. 115 810, Feb. 12, 1946. *Chimie et Industrie 57,* No. 2, 163 (Feb. 1947).

Regenerated cellulose is finished with 0.5-1.75% formaldehyde, and 0.1-0.4% formaldehyde is used for natural cellulose fibers. The finishing process is catalyzed by a substance which yields free acid during the process. TTD: 11-47

Sizes. Cereal starch *vs.* tamarind pectin as sizing material. N. S. Bhathena, Din Products, Ltd. *Indian Textile J. 57,* 548-9 (Mar. 1947).

A discussion of the merits of cereal starches and tamarind pectin for sizing materials. TTD: 11-47

Organdie finish. Heberlein & Co., A.-G. Brit. P. 581 785. *Textile Mfr. 73,* 197 (Apr. 1947).

A transparent or organdie effect is imparted to fabric by impregnating the fabric with a solution or emulsion of an alkylated urea-formaldehyde resin or an alkylated amino triazine formaldehyde resin (at least 5%). After drying, the resin is fixed by heat. TTD: 11-47

COLOR VII

GERMAN RAYON DYEING, PRINTING, AND FINISHING INDUSTRY. Anon. Brit. Intelligence Objectives Subcommittee Report No. 1359; price 15s 4d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

OBSERVATIONS ON DYEING AND FINISHING METHODS IN GERMANY. Anon. Field Information Agency, Technical, Report No. 644; price 15s 4d.

Listed in Classified List No. 11 of Reports on German and Japanese Industry (Aug. 1947). TTD: 11-47

Bleaching VII 1

Bleaching agent. Sodium chlorite as bleaching agent. II. E. Elöd & A. Klein. *Melliand Textilber. 27,* No. 8, 263-76 (Nov. 1946). *Chimie et Industrie 58,* No. 2, 174 (Aug. 1947).

Use of sodium chlorite as a bleaching agent for cotton necessitates careful control of the pH, which must be less than 3.5, and continuous addition of the bleaching

agent to compensate for the loss caused by spontaneous decomposition of the chlorite. TTD: 11-47

Bleaching linen. Chemistry and bleaching of linen. A. J. Turner, Linen Industry Research Assn. *Fibres, Fabrics & Cordage 14,* 248-50, 252, 272 (June, 1947).

A review of the history of bleaching is given. Developments in the past 30 years and some facts about the newer chemical bleaching agents are discussed. TTD: 11-47

Bleaching wool. Wool bleaching. Anon. *Wool Record & Textile World 71,* 574, 576 (Mar. 20, 1947).

Reduction and oxidation bleaching of wool to obtain pure white yarns and fabrics are discussed. Advantages and disadvantages of each method are also described. TTD: 11-47

Persulfates. Persulfates in desizing and bleaching. Anon. *Indian Textile J. 57,* 816 (June, 1947).

The use of persulfates in desizing and bleaching operations is discussed. Formulas for persulfate use in these processes are given. TTD: 11-47

Dyeing VII 2

Developed dyeing. Process for dyeing cellulose or synthetic materials with greater efficiency. (Société Rhodiaceta.) French P. 913 158, May 20, 1946. *Chimie et Industrie 57,* No. 4, 379 (Apr. 1947).

The material to be dyed is wetted or impregnated with an aqueous suspension or solution of the dye, containing no thickening agents, and steamed until the dyes are completely developed. TTD: 11-47

Dyeing. Old dyestuffs and new textiles and new dyestuffs and old textiles. H. E. Fierz-David. *Chimia 1,* No. 10, 194-9 (Oct. 1947).

Changes in textile chemistry during the past 50 years and suggestions for new improvements are discussed. The need for improved methods of dyeing rather than the development of new dyes is stressed. The author points out that synthetic fabrics are inferior to natural ones, since they lack the macromolecular structure and submicroscopic orientation of natural fibers. TTD: 11-47

Dyeing and finishing. Hosiery dyeing and finishing in past twenty-five years. R. H. Smith, Melrose Hosiery Mills. *Am. Dyestuff Reptr. 36,* 187-8 (Apr. 21, 1947).

Developments in dyeing and finishing hosiery during the past 25 years are reviewed. Major improvements have

been in better colors, chemicals, and equipment. TTD: 11-47

Dyeing blends. Dyeing of fast shades on piece goods. H. F. Clapham & G. R. Turner, E. I. duPont de Nemours & Co., Inc. *Am. Dyestuff Reptr. 36,* 267-8, 274 (May 19, 1947).

A review of the dyeing of nylon and/or acetate mixtures with wool. TTD: 11-47

Dyeing blends. Dyeing of fast shades on piece goods. L. S. Thompson, Gen. Dyestuff Corp. *Am. Dyestuff Reptr. 36,* 265-6 (May 19, 1947).

The dyeing of cotton or viscose rayon mixed with wool is reviewed. Selection of dyes, the use of direct colors, vat colors, etc., are discussed. TTD: 11-47

Dyeing synthetic fibers. Synthetic fibers and their dyeing. E. Koester, I. G. Farbenindustrie. *Am. Dyestuff Reptr. 36,* 189-92, 223-4 (Apr. 21, 1947).

A brief survey of the methods of production and properties of polyvinyl chloride and polyamide fibers. Methods of dyeing these fibers are discussed. TTD: 11-47

Dyeing yarn blends. Dyeing of yarn blends. Ormond W. Clark, Am. Cyanamid Co. *Am. Dyestuff Reptr. 36,* 269-74 (May 19, 1947).

Methods for dyeing yarn blends containing wool are described. Some aspects of dye behavior on these blends are illustrated by slides. TTD: 11-47

Kupensaure process. Evaluation of Kupensaure process. Anon. *Am. Dyestuff Reptr. 36,* 142-8 (Mar. 24, 1947).

A paper, presented at an AATCC meeting, on the use of the Kupensaure process for applying vat colors to synthetic and natural fibers. TTD: 11-47

Metachrome dyeing. Metachrome dyeing. II. Chas. A. Schmitt, Sandoz Chemical Works, Inc. *Am. Dyestuff Reptr. 36,* 238-44 (May 5, 1947).

The effect of the presence of Fe on dyeing with chrome colors is discussed with particular reference to shade damage. The use of the metachrome method of dyeing minimizes this adverse effect. (For Part I of this paper see *Am. Dyestuff Reptr. 28,* 336 (1939).) TTD: 11-47

Predyeing treatment. Souring at high temperatures. V. D. Riswadkar. *Indian Textile J. 57,* 828-9 (June, 1947).

Personal experiences in attaining good dyeing results by boiling cloth with HCl (in a predyeing treatment) are related. TTD: 11-47

Vat dyeing. Oxidation process in dyeing and printing with vat dyes. K. Wolterek. *Melliand Textilber. 27,* No. 9, 363-5 (Dec. 1946); *Chimie et Industrie 58,* No. 2, 174 (Aug. 1947).

Printing fabrics which have been vat dyed generally has a reducing effect on the vat dye, thereby rendering it colorless. Various oxidation processes, by which this disadvantage can be overcome, are described. One of the most effective oxidizing agents is a perborate, used in an acid bath. TTD: 11-47

CHEMISTRY OF SYNTHETIC DYES. I. Ubaldini. Studio Editoriale "Vivi," Milan; 1947; 373 pp.; price 650 l.

Reviewed in *La Chimica e L'Industria 29,* No. 4/5, 127 (Apr.-May, 1947). TTD: 11-47

Printing VII 3

Printing films. Decorating of vinyl films. A. B. Sherry, Stanley Chemical Co. *India Rubber World 116,* 655 (Aug. 1947).

Three methods of printing on vinyl film are: machine printing directly on the film, machine printing on paper and transferring to the film, and hand printing by the silk screen method. These 3 methods and the ink required are briefly reviewed. TTD: 11-47

Printing thickener. Flotex. Anon. *Am. Dyestuff Reptr. 36,* 222 (Apr. 21, 1947).

Flotex, a colorless, clear-cooking starch derivative, that may be used as a printing thickener is noted. TTD: 11-47

Printing thickener. Vulcanized starch. Anon. *Am. Dyestuff Reptr. 36,* 179 (Apr. 7, 1947).

A brief note on a vulcanized starch that may be used as a printing thickener and is resistant to the swelling action of heat and chemicals. TTD: 11-47

Screen table adhesive. Screen table adhesive. Anon. *Am. Dyestuff Reptr. 36,* 221 (Apr. 21, 1947).

A brief note on screen printing-table adhesive, Resyn Adhesive Q 3613, which will hold unprinted cloth to the table during printing. The cloth may be removed readily after printing with no adhesive sticking to it. TTD: 11-47

Chrome dye printing. Durand & Huguenin. Brit. P. 582 089. *Textile Mfr. 73,* 242 (May, 1947).

In printing with chrome mordant dyes, the dye, in solution with urea and no more water than necessary to dissolve the dye, is mixed with a cellulose lacquer, which may be preheated to about 60°C and then cooled. To this is added a chromic or formic acid salt, and with

this paste the fabric is printed and then dried. TTD: 11-47

Printing. K. Tchekmeian. Brit. P. 582 351. *Textile Mfr. 73,* 291 (June, 1947).

Designs, particularly in fine lines, may be printed on a fabric by means of an apparatus comprising a copper roller, which may be heated, having the pattern in relief upon its surface, and a surface of printing wax resiliently held in contact with the roller. The pattern is transferred to the fabric in wax when the heated roller passed over the fabric as it rests on the wax. TTD: 11-47

POSITEX AS A TEXTILE PRINTING PASTE. C. M. Blow. British Rubber Development Board, 19 Fenchurch St., London, E. C. 3; 8 pp.

Reviewed in *Fibres, Fabrics & Cordage 14,* 406 (Sept. 1947). TTD: 11-47

Measurement and defects VII 4

Color measurement. Color measurement of dyed textiles. P. M. Heertjes, E. Van Den Heuvel & J. Latichius. *Chem. Weekblad 43,* No. 40, 619-28 (Oct. 4, 1947).

A photoelectric apparatus, based on the Keuffel & Esser Color Analyzer, was designed for color measurement of dyed textiles. The reflectance at one or more wave lengths was determined and taken as a color coordinate when studying the relation between the quantity of dye on the fiber and the resulting color. These determinations were made on cotton dyed with a variety of dyes. TTD: 11-47

Dye nomenclature. Dye nomenclature: plea for more system. Wm. H. Cady. *Am. Dyestuff Reptr. 36,* 253-4, 279 (May 19, 1947).

A discussion on the lack of system in naming dyes and suggestions for a more uniform nomenclature. TTD: 11-47

Dye penetration. Penetration means less depth of shade. Narhari H. Shah. *Indian Textile J. 57,* 458, 460 (Feb. 1947).

A deeper shade of color is developed on mercerized cotton than on unmercerized when dyed under the same conditions. This fact is due to a change in optical properties and reduced dye penetration. TTD: 11-47

Dye reflectance. Effect of dyestuffs on temperature rise of fabrics exposed to light. Anon. *Am. Dyestuff Reptr. 36,* 159-65 (Apr. 7, 1947).

A paper, presented at an AATCC meeting, discusses measuring the effect of dyes on the temperature rise of

fabrics. The results show that dyed fabrics of high infrared reflectance exhibit less increase in temperature when exposed to light than those of low reflectance.
TTD: 11-47

Dyeing defects. Some dyehouse problems. Anon. *Wool Record & Textile World 71,* 827-8 (Apr. 17, 1947).

Some causes of stains in dyed fabrics and their prevention are reviewed. TTD: 11-47

Light. Effect of light on colors and fabrics. Colorist. *Textile Mfr. 73,* 278-9, 282 (June, 1947).

A discussion of the effect of light on natural fibers, on dyeing and printing colors, and on finished fabrics.
TTD: 11-47

Tendering. Tendering in sulfur blacks. Colorist. *Textile Mfr. 73,* 188-9 (Apr. 1947).

Tendering of sulfur blacks may be prevented by thorough oxidation of the dye in the interior of the fiber. Methods of oxidation are air oxidation, water oxidation, perborate oxidation, and bi-chromate oxidation.
TTD: 11-47

Tendering with vat dyes. Society of Chemical Industry in Basle. Brit. P. 582 143. *Textile Mfr. 73,* 242 (May, 1947).

An increased resistance to light tendering is imparted to textiles dyed with certain yellow or orange vat dyes by treating the dyed material with a water-soluble reaction product of formaldehyde and a compound containing, at least once, the atomic grouping: —NH.C(|):N—. In some cases it is desirable to add a salt such as copper acetate to the bath.
TTD: 11-47

PROOFING VIII

Fireproofing. Composition and function of flame-resistant treatments for textiles. Robt. W. Little, Ellicott Laboratories. *Am. Dyestuff Reptr. 36,* 135-9 (Mar. 24, 1947).

A lecture at an AATCC meeting on the theories of fireproofing, fireproofing treatments and procedures.
TTD: 11-47

Flammability. Flammability of wearing apparel. Herman E. Hager. *Am. Dyestuff Reptr. 36,* 141, 149 (Mar. 24, 1947).

A lecture (before the AATCC) on the flammability of textiles, flammability testing machines, and flammability laws. TTD: 11-47

Insectproofing. Termite-resistant textiles. G. Becker & (H.) Sommer. *Melliand Textilber. 27,* No. 8, 247-51 (Nov. 1946); *Chimie et Industrie 58,* No. 2, 174 (Aug. 1947).

Textiles which are especially treated to render them resistant to termites and tropical conditions are subjected to a series of special tests, including exposure to high temperatures, sunlight, excessive humidity and frequent washing. TTD: 11-47

Proofing wool cloth. Ravages of moth-grub. Maurice Kolker, Catomance, Ltd. *Wool Record & Textile World 71,* 489 (Mar. 13, 1947).

A lecture (summarized) on methods for mothproofing woolens and various aspects of showerproofing wool cloth. TTD: 11-47

Shrinkproofing fabrics. Anti-shrinkage processes. C. S. Jones. *Indian Textile J. 57,* 725-7 (May, 1947).

Processes for shrinkproofing fabrics are reviewed.
TTD: 11-47

Water repellency. Process for rendering cellulose fibers water-repellent. (J. R. Geigy, S. A.). French P. 913 424, Sept. 10, 1946. *Chimie et Industrie 57,* No. 4, 378 (Apr. 1947).

Condensation products are used which are prepared from amides, aliphatic or aromatic mono- or polycarboxylic acids, dicyanodiamide and formaldehyde.
TTD: 11-47

TESTING AND ANALYSIS IX

Physical properties IX 1

Cotton fiber diameter. New method for finding diameter of cotton fibers. R. L. N. Iyengar. Technological Laboratory (Bombay). *Indian Cotton Growing Rev. 1,* 32 (Jan. 1947).

The fibers are mercerized and dyed black; then mounted parallel to each other on a slide. The slide is then placed in a holder in the plate of a slit between a constant source of light and a photoelectric cell. The amount of light cut off by the fibers is proportional to the length of the fibers (equal to the width of the slit), the number of fibers, and their average diameter. From these values and the values for the photoelectric current, diameters are calculated. Materials varying in diameter from 12 to 120 microns have been examined, and the method found to be applicable to other fibers, filaments, hairs, fine wire, etc. Results checked closely with diameters determined by means of a microscope.
TTD: 11-47

Indian cotton. Precleaning and ginning tests on In-

dian cotton. V. Venkataraman, Technological Laboratory (Bombay). *Indian Cotton Growing Rev. 1,* 30-1 (Jan. 1947).

Precleaning was carried out in 12 Indian cottons in (1) a double cylinder seed-cotton opener, (2) a feeding, extracting and cleaning machine, and (3) a 5-cylinder I-type cleaning machine. Comparisons were made as to how each opening process affects the ginning, fiber and spinner tests. The ginning tests were carried out on (1) a saw gin, (2) a double roller gin, and (3) a single roller gin. Spinning and fiber tests were made on six of the cottons, and the effects of precleaning of lint determined. No general conclusions are drawn. More detailed information is given in leaflets published by the laboratory. TTD: 11-47

Spectrophotometric measurements. Adaptation of automatic spectrophotometer for special measurements. R. H. Kienle & E. I. Stearns, Am. Cyanamid Co. *Instruments 20,* 1057-63 (Nov. 1947).

Twenty-three modifications of the automatic recording spectrophotometer are described and illustrated; among these are a microtransmission sample holder, a rotating skein holder, and an optical rotation sample holder. Among several illustrative examples discussed in which these modifications are helpful is the problem of the chemical analysis of reactions on fibers.
AFR TTD: 11-47

Testing colorfastness. Colorfastness of textiles to pleating. Anon. *Am. Dyestuff Reptr. 36,* 207 (Apr. 21, 1947).

The procedure for a tentative test method of determining the fastness to pleating of dyed fabrics.
TTD: 11-47

Testing cotton. Estimation of wax content and feel of a cotton from its physical characters. C. Nanjundayya, Indian Central Cotton Committee. *Indian Textile J. 57,* 899-910 (July, 1947).

A study of the relationship between wax-content and physical characteristics of cotton and between the grader's estimation of feel and physical characteristics of cotton. TTD: 11-47

Testing dyed fabrics. Resistance of colored textiles to phototropism. Anon. *Am. Dyestuff Reptr. 36,* 207 (Apr. 21, 1947).

A tentative test for determining the reversible change in shade of dyed fabrics exposed to light is given.
TTD: 11-47

Testing fabric permeability. Apermeter. John H. Skinkle & Arthur J. Moreau, Lowell Textile Inst. *Am. Dyestuff Reptr. 36,* 245-7 (May 5, 1947).

An illustrated description of the Apermeter, an apparatus that measures air permeability, is given. Comparison is made between the Apermeter and the Frazier instrument. TTD: 11-47

Testing fire resistance. Testing for fire resistance. Jas. R. Redmond. *Am. Dyestuff Reptr. 36,* 140, 148-9 (Mar. 24, 1947).

Methods for testing fire resistance with particular reference to the AATCC test are discussed in a lecture.
TTD: 11-47

Testing nylon cord. Tests on extensibility of nylon cordage. Anon. *Fibres, Fabrics & Cordage 14,* 396 (Sept. 1947).

Results of tests on nylon cordage are briefly noted.
TTD: 11-47

Testing vulcanized rubber. Tear resistance of vulcanized rubber. Gerald Reinsmith, War Dept. *India Rubber World 116,* 499-503, 507 (July, 1947).

Methods for measuring tear resistance of rubber goods, as floor mats, impregnated products, etc., are described.
TTD: 11-47

Tire cord testing. Tire cord testing machine. Anon. *India Rubber World 116,* 546, 550 (July, 1947).

A description of a flex testing machine that can test 20 tire fabrics simultaneously. TTD: 11-47

Wetting of textiles. Study of wetting of textile materials. I. J. Gruntfest, O. B. Hager & H. B. Walker, Rohm & Haas Co. *Am. Dyestuff Reptr. 36,* 225-6, 252 (May 5, 1947).

The hydrometer method for evaluating the wetting of textile materials is described. TTD: 11-47

Yarn tester. Uster yarn evenness tester. Anon. *Indian Textile J. 57,* 359 (Jan. 1947).

A yarn tester (Zellweger) that measures the evenness of card slivers and rovings by a high-frequency condenser field is described and illustrated. TTD: 11-47

ASSESSMENT OF SPINNING QUALITY. C. R. Nodder. Indian Central Jute Committee; 8 pp.; price 6d.

Reviewed in *Fibres, Fabrics & Cordage 14,* 60 (Feb. 1947). TTD: 11-47

EFFECT OF MOISTURE ON STRENGTH OF JUTE YARNS. K. R. Sen, S. B. Bandyopadhyay, & C. R. Nodder. Indian Central Jute Committee; 10 pp.; price 6d.

Reviewed in *Fibres, Fabrics & Cordage 14,* 60 (Feb. 1947). TTD: 11-47

SINGLE THREAD STRENGTH OF JUTE YARNS IN RELATION TO TEST LENGTH. K. R. Sen & C. R. Nodder. Indian Central Jute Committee; 19 pp.; price 1s 6d.

Reviewed in *Fibres, Fabrics & Cordage 14,* 60 (Feb. 1947). TTD: 11-47

SOME NOTES ON STRENGTH OF JUTE PLY YARNS. C. R. Nodder. Indian Central Jute Committee; 8 pp.; price 6d.

Reviewed in *Fibres, Fabrics & Cordage 14,* 60 (Feb. 1947). TTD: 11-47

Chemical analysis IX 2

Cotton identification. Identification of Punjab-American and Mollisoni cottons. D. L. Sen, Technological Laboratory (Bombay). *Indian Cotton Growing Rev. 1,* 43-4 (Jan. 1947).

Unbleached cotton absorbs greater quantities of methylene blue from solution than bleached cotton, due to the presence of protein and pectic matter. Punjab-American cotton was observed to absorb greater amounts of direct dyes than Mollisoni, probably because of the greater surface area of a given weight of fiber, or greater amounts of protein and pectic matter, or both. This difference in the depth of shade produced is used to detect adulteration of Punjab-American cotton with Mollisoni. TTD: 11-47

Nylon determination. Determination of molecular weight of nylon. J. E. Waltz & Guy B. Taylor, E. I. du Pont de Nemours & Co. *Anal. Chemistry 19,* 448-50 (July, 1947).

Analytical methods for determining the number average molecular weight of alcohol-soluble nylons and alcohol-insoluble, phenol-soluble nylons by end-group titration are described. TTD: 11-47

Peroxide bleaching. Determination of residual silica on cotton in peroxide bleaching. Bertha DuBose & V. B. Holland, Cannon Mills Co. *Am. Dyestuff Reptr. 36,* 227-8 (May 5, 1947).

A method for determining the silica retained on cotton during peroxide bleaching is described. TTD: 11-47

TEXTILE MILLS X

Buildings, machinery, power X 1

Centralized oiling system. Modern methods of oiling. F. A. Westbrook. *Textile Mfr. 73,* 177-8 (Apr. 1947).

A description of a centralized lubrication system. Among the many advantages of this system over manual lubrication are: time saving, less yarn damage and economy in oil consumption. TTD: 11-47

Lint cleaners. Automatic monorail lint cleaners. *Flow 2,* 26, 28 (Mar. 1947).

A number of textile mills are using self-propelled automatic blowers which travel on loops of monorail track through lint-producing departments. This directs a twisting column of air down to the machines and another column of air against the ceiling. They are used in long-draft spinning and in winding, and have been adapted to use in the card room. Hand cleaning and breakage are reduced, the accumulation of lint on overhead equipment is prevented, and bunches of waste no longer fall into the work. TTD: 11-47

Machinery. Textile machinery at Prague Spring Fair. Anon. *Textile Mfr. 73,* 226-7 (May, 1947).

A review of the textile machinery shown at the Prague Spring Fair. TTD: 11-47

Oil firing boilers. Oil firing of Lancashire type boilers. W. Francis. *Textile Mfr. 73,* 115-17, 179-81 (Mar., Apr. 1947).

The main advantages of oil over coal firing for boilers are: cleanliness, ease of handling, storage space, controllability, and high calorific value. Fuel oil characteristics are discussed (*Cf.* C. F. Wade, TTD *4,* 289). A typical layout for an oil firing installation and different types of atomizers are described with some details of their operation and maintenance. TTD: 11-47

Piping. How "N" system simplified piping cost estimation. R. A. Dickson. *Chem. Eng. 54,* No. 11, 121-3 (Nov. 1947).

Costs of proposed piping systems can be estimated to 10% accuracy, by reference to a simple system of known cost. Charts are supplied for correlation.
LCL TTD: 11-47

Roll coating. Improved roll coater. Anon. *India Rubber World 116,* 826 (Sept. 1947).

Adhesives and sizings may be more uniformly spread by a new roll coating machine which is described and illustrated. TTD: 11-47

Scientific welding. Textile applications of scientific welding. C. W. Brett, Barimar, Ltd. *Textile Mfr. 73,* 211, 215 (May, 1947).

The use of scientific welding for repairing and reconditioning textile machinery is discussed. TTD: 11-47

Cam-follower rollers. Skefco Ball Bearing Co., Ltd. Brit. P. 582 238. *Textile Mfr. 73,* 243 (May, 1947).

Anti-friction bearings comprising cup-shaped housings

to be slid endwise on each bearing, are fitted to each end trunnion of cam-follower rollers. Outward endwise movement is prevented by interlocking the housings with a semi-cylindrical bed into which they are dropped. TTD: 11-47

ELEKTRON MAGNESIUM ALLOYS. Anon. F. A. Hughes & Co., Ltd., Abbey House, Baker St., London, N. W. 1; 20 pp.

Reviewed in *Fibres, Fabrics & Cordage 14,* 315 (July, 1947). TTD: 11-47

Lighting and air — X 2

Air conditioning. Air conditioning in textile mills. E. Howlett. *Textile Mfr. 73,* 171-3, 263-4 (Apr., June, 1947).

The effect of seasonal changes on air conditioning systems is discussed. A description of various types of fabric filters for dust elimination is given, and the Cheetham air conditioning system is described. TTD: 11-47

Heating and ventilating. Team work in research. C. H. Lander. *Engineering 161,* 21-2 (Jan. 4, 1946).

Conditions of heating and ventilating in textile mills and factories in Great Britain are discussed. Pipe-covering materials found to be most efficacious in preventing high humidity and heat transfer include sectional cork, slag wool, and silk waste. TTD: 11-47

Humidity control. New humidity control system. Anon. *Instrumentation 2,* No. 6, 10 (July-Aug. 1947).

A brief illustrated description of a humidity control panel (Minneapolis-Honeywell) for heating installations in textile mills. TTD: 11-47

Lighting. Lighting of mill and other building interiors. Anon. *Indian Textile J. 57,* 920-6 (July, 1947).

A code for good interior lighting, of the Illuminating Engineering Society (London), is presented. TTD: 11-47

Dust control. H. Horsfall. Brit. P. 582 292. *Textile Mfr. 73,* 290 (June, 1947).

Mechanical cleaning gear for the fabric filter tubes of dust collectors consists of a flexible beater, arranged along the tube and retained, normally, near the wall of it, beams being provided to pluck the beater so as to flex it and then to release it so as to strike the tube wall. TTD: 11-47

Hazards; operations; efficiency — X 4

Fatigue in mills. Fatigue in textile industry. Waldemar Schweisheimer. *Indian Textile J. 57,* 823-4 (June, 1947).

Causes of fatigue in textile mills are discussed and suggested ways for overcoming fatigue are given. TTD: 11-47

Materials handling. Material handling survey of rubber goods industry. Anon. *India Rubber World 116,* 351-4 (June, 1947).

Use of special skids for storage of rolls of processed fabrics is one of the many ways electric trucks are utilized in the rubber goods industry. TTD: 11-47

Materials handling. Defects and remedies. S. R. Balasubramanian. *Indian Textile J. 57,* 610-11 (Apr. 1947).

Ineffective methods of handling materials in cheese winding, spinning, etc., are discussed and remedies suggested. TTD: 11-47

Materials handling. Materials handling, "almost" a new business science. John F. Johannsen, Hyster Co. *Mfrs'. Record 116,* No. 11, 43, 59-61, No. 12, 40, 66, 76 (Nov., Dec. 1947).

A lack of understanding of the principles of the materials handling has handicapped industry. Increased production can usually be achieved by proper study and application. The unit load principle which involves a method of arranging and handling goods in a standardized package. It facilitates handling, reduces breakage, and minimizes pilfering.
LCL TTD: 11-47

Steam economy. Use of steam in woolcombing. Anon. *Wool Record & Textile World 71,* 421-3 (Mar. 6, 1947).

A summary of methods of economizing on steam consumption in wool processing. TTD: 11-47

Weaving production. Production measurements and P. M. H. in weaving sheds. I. Laird. *Textile Mfr. 73,* 78-82, 101, 127-9, 174-6, 204-6, 254-6 (Feb.-June, 1947).

Production per man hour (PMH) cannot measure efficiency or production if the linear yard is used as the production unit. Ideal measurement of weaving production is counting picks, accomplished by pick counters attached to looms and graphs of these picks. The weaver's PMH in relation to the machine-hour production and PMH as a basis for wage payment are discussed. TTD: 11-47

TEXTILE RESEARCH XII

AATCC research. 149th meeting of research committee. Louis A. Olney. *Am. Dyestuff Reptr. 36,* 195-207 (Apr. 21, 1947).

A report on research projects (detergency, water resistance of fabrics, etc.) of the AATCC. TTD: 11-47

British fabrics. Revolution in textile fabrics. Oswald Dutch. *Indian Textile J. 57,* 927 (July, 1947).

A brief review of developments in new processes in the United Kingdom. TTD: 11-47

Cotton research. Research in cotton technology. Anon. *Indian Textile J. 57,* 550 (Mar. 1947).

A report on the research activities and developments of the Technological Laboratory, Bombay. TTD: 11-47

Functional engineering. Functional engineering in textiles. Wm. F. Luther, Univ. of Chattanooga. *Am. Dyestuff Reptr. 36,* 215-16 (Apr. 21, 1947).

A lecture on the use of fibers for specific textile designs by functional engineering. TTD: 11-47

Indian industries. Indian textile industries. Anon. *Wool Record & Textile World 71,* 804 (Apr. 17, 1947).

A review of Indian textile industries and plans for future developments. TTD: 11-47

Indian industry. Textile developments in Indian States. Anon. *Ambassador,* No. 6, 157 (1947).

Future development of India's textile industry is briefly discussed. TTD: 11-47

Indian industry. Industrial development in South Indian states. Anon. *Indian Textile J. 57,* 463-4 (Feb. 1947).

Developments in Indian industry are briefly reviewed. TTD: 11-47

Italian industry. Italy's textile industry vital factor in rehabilitation. Mary E. Poole. *Indian Textile J. 57,* 350-4 (Jan. 1947).

A review of the history of Italian textile industries and their position today. TTD: 11-47

Swedish textile research. Swedish Institute for Textile Research. Anon. *Engineering 162,* 159 (Aug. 16, 1946).

The Swedish Institute for Textile Research has been inaugurated in Gothenburg and is affiliated with the Chalmers Institute of Technology. It will carry on

technical and scientific research on the manufacture and use of all varieties of textiles, including plastics. The equipment includes all the apparatus needed for chemical and physical investigations, as well as bleaching and dyeing machinery, washing machines, etc., for practical tests. TTD: 11-47

Textile developments. Technical notes on textiles. C. S. Jones. *Indian Textile J. 57,* 452-7 (Feb. 1947).

Developments in British textile printing, production of luminous fabrics and cordage, a new vegetable fiber (Falconia*), cotton machinery, etc., are discussed. TTD: 11-47

Textile developments. Textile technical notes. C. S. Jones. *Indian Textile J. 57,* 532-4 (Mar. 1947).

A review of the developments in glass fabrics, synthetic resins, and shuttleless looms. TTD: 11-47

Textile industry. Textile industry in United States. Anon. *Indian Textile J. 57,* 322-3, 331 (Jan. 1947).

A brief review of the textile industry in the United States. TTD: 11-47

Textile research. Textile teaching and research. E. J. Poole, Wool Industries Research Assn. *Wool Record & Textile World 71,* 864, 866 (Apr. 24, 1947).

A lecture (summarized) on teaching and research in the textile field. TTD: 11-47

Textile technology. Progress in textile technology. Waldemar R. Kuenzel, Deering, Milliken & Co. *Am. Dyestuff Reptr. 36,* 212-14 (Apr. 21, 1947).

A brief review of the progress in new fibers and finishes and suggested means of making this progress effective (a lecture). TTD: 11-47

CAREERS IN TEXTILE DYEING AND FINISHING TRADES. K. E. Marsden. Southern Editorial Syndicate, Ltd., 55 Turnmill St., London E. C. 1; 109 pp.; price 5s.

Reviewed in *Fibres, Fabrics & Cordage 14,* 226 (May, 1947). TTD: 11-47

STUDIES IN THE STRUCTURE OF THE SWEDISH TEXTILE INDUSTRIES. (English summary). Anon. Swedish Institute for Industrial Research, Stockholm 16; 503 pp.

Reviewed in *Textile Mfr. 73,* 289 (June, 1947). TTD: 11-47

* Probably *Palconia* (TTD: *3,* 262).